

Professor E. Bessey's Observations at the World's Fair---III



A FILIPINO IN THE WILD STATE—THIS IS A CHIEF OF THE HEAD HUNTERS—COMPARE WITH NEXT PICTURE.

BY FAR the largest building on the World's fair grounds is the Hall of Agriculture, with an end front thirty rods wide and a total length of almost one hundred rods. It stands on a rise of land which separates it from all the other buildings. Some idea of its immense size may be obtained by comparing its height with that of the crowds of people at its doors in Figure 1, which shows the north end of the building. Approaching it from the north, one's attention is attracted by the Ceylon building on the left and the Canadian building on the right, both filled with exhibits characteristic of the countries to which they belong. The Ceylon building is said to be a reproduction of an ancient Buddhist temple. In it one may see a cup of genuine Ceylon tea. Directly ahead is the great forest clock, which is no doubt the largest clock ever built. The face is more than 100 feet in diameter and made entirely of flowers. The figures are made of the dark-colored plants set in a mass of lighter foliage. The face is so large that a single minute is about five feet long. The clock is of the kind in which the minute hand moves minute by minute, the hands resting between each movement. At the hour the time is struck on a large bell in the little white tower on the right at the back. I may say in passing that the machinery for running the clock is found in these little towers.

The Agricultural Exhibits.
Entering the main doorway of the Hall of Agriculture, one is bewildered at the vastness of the room and the multitude of exhibits. Great Britain, Japan, Germany, New Zealand, Austria attract one's notice

among foreign countries, while here the states of the union vie with each other in showing what they can do in the way of making an effective showing of their products. I cannot attempt to tell here what the different states show. That task must be reserved for the Official Catalogue. Of course I looked at the corn, wheat, oats and grasses shown by Iowa, the immense exhibit, mainly of corn, made by Missouri, the corn, wheat and oats and the "corn steer" of Kansas, but I pass these rapidly as I make my way to Nebraska. Its beautiful sixty-foot tower of golden corn is the finest thing of its kind in the building. And so is its exhibit of grasses and grains. Here is where the brains of those who prepared the material came into play. Everything about the exhibit is very perfectly done. This is the characteristic feature of this unique exhibit. Instead of a manufactured model of an ox, we have the genuine thing in the skin of the most perfect steer that this country has seen for many a year. There he stands, the incomparable "Challenger," admired by everyone who passes by. He represents something real. There, too, are his ribs—the very ribs of the steer he won last year in Chicago. That exhibit alone is worth more than the whole show made by some states.

I cannot say too much for the little "beater and the moving pictures of Nebraska" scenes. I was so fortunate as to be given an excellent seat at one of these exhibits. The room was packed with a most appreciative audience. Here they saw herds of fat hogs, flocks of fine sheep, herds of cattle and horses and many characteristic farm scenes, all taken from actual life. It was a most pleasing series of pictures, and all who saw them felt that indeed this is a good state, flowing with milk and honey. At the close of the exhibit I heard a man say that his only criticism was that it wasn't long enough.

Hall of Horticulture.
But I must not stop too long, even in the Nebraska exhibit. I must hurry away to the Hall of Horticulture, directly south of the Hall of Agriculture. Here I find apples, apples, apples. They are of all sorts and colors and sizes and kinds. They all look nice, and one wishes he could eat them all. I walk through the aisles, by state after state, and grow more and more hungry. I find Arkansas, "the land of the big, red apples," and, sure enough, here they are in quantity, and they are big and red. At this point I meet Prof. Hanson, the expert judge, who is perusing over his work of determining which fruits are the best. At last I reach Nebraska and feel at home, for here I am asked to eat some of the beautiful samples. I eat and pronounce them good. Were the judge, Nebraska fruit would be placed very high indeed.

One of the most interesting buildings is the one devoted to forestry, fish and game. The west end is devoted to forestry wholly, while in the east end most of the space is given to fish and game. I do not care especially for the latter, but notice that the crowds are densest in this end. People like to look at moving things, so they

hang about the fish tanks, and lean over the railing to look at the discolored beavers and other beasts. That they are attracted by the living, moving thing is shown by the fact that they pass by the stuffed animals with scarcely a glance. So the crowd goes on by the samples of exquisite woods shown by many states. California has a magnificent exhibit with woods of many colors. Louisiana shows its many woods in a very instructive and helpful way, for each block is not only labeled in large letters, but on it is a suggestive printed paragraph calling attention to the value and uses of that particular wood. The United States bureau of forestry teaches several valuable lessons in a series of large photographic transparencies showing methods of planting, cutting, reforesting, forest destruction, effect of fire, etc. Several of these views are taken from the forest reserve in central Nebraska, showing how the seedlings were started and how they are set in the ground afterward. Near the building is a plot of ground showing all stages of the growth of forest trees from the seed beds to those which have attained considerable size. Not far away are several large areas devoted to out-of-door demonstrations by the United States bureau of forestry.

Big Locomotives.
In the Transportation building I saw the biggest locomotive ever built. It is in reality a double locomotive. Near the front of the monster machine are the steam cylinders in the usual place. These turn



FILIPINOS CONSIDERABLY MODIFIED BY EDUCATION—THESE ARE PUPILS IN ONE OF THE SCHOOLS.



NORTH END AND MAIN ENTRANCE OF THE AGRICULTURAL BUILDING, WITH THE GREAT CLOCK JUST IN FRONT—THE CANADIAN BUILDING AT THE RIGHT AND THE CEYLON BUILDING AT THE LEFT.

Latest Developments in Electricity Described by a Noted Expert

(Copyright, 1904, by Frank G. Carpenter)
ST. LOUIS, Oct. 28.—(Special Correspondence of The Bee.)—If you want to see what the world is really doing, come to the St. Louis exposition. The largest inventions along every line are shown here. This is the twentieth century fair, and it has all sorts of new twentieth century machinery. I have spent today in the great Palace of Electricity, talking with Prof. Goldsborough, who has charge of the electrical department. I have watched his cooking with lightning, and smoothing boiled shirts with electric irons. I have seen men healing diseases with electric sparks, telegraphing a thousand words a minute, telephoning without wires, and even without the aid of the "bell" girl. Yes, actually telephoning without the intervention of her nasal twang, and without the danger of her hearing the secrets they transmit. They make their own connections and talk as long as they please, unbothered by her majesty.

Sphere of the Automatic Telephone.
In my talk with Prof. Goldsborough, I asked him about these automatic telephones. He said:

"We have three different systems exhibited here. The Strömberg system has been in process of development for a number of years, but it has only recently become thoroughly commercial, and it is now extensively used in the factory towns about Boston and Chicago. We have it here in the electricity building and use it in our business. The exchange is so arranged as to show the working of about 10,000 telephones. We have telephones at each of the various entrances of this building, in our offices, in the laboratory of the national bureau of standards and elsewhere. The system gives us a means of secret

communication with one another, the central office being eliminated. We can telephone what we please, and it is practically impossible for any one else to know what goes on.

"In addition to this," continued Prof. Goldsborough, "we have the Faller automatic telephone system, which has been so developed that it is now ready for commercial application on a large scale, and also the automatic telephone of the Bell Telephone company. The Bell Telephone company has been quietly perfecting such machines for several years, and they have their apparatus now on view in section 17 of this building. This is practically the first announcement that has been made of it, and it is one of our most important novelties."

"Will such telephones come into general use?"
"I believe that they will be used at first in small installations," said Prof. Goldsborough. "It may take some time to adapt them to the cities or to make it possible that they should take care of the enormous traffic of a large city without the use of operators. That is a matter of gradual development, and it involves serious engineering problems."

"Then we shall have operators for some time yet?"
"I think not," was the reply. "We still use tallow candles, gas lamps and coal oil; although we have the electric light, which excels them as an illuminant. It is not possible to say as yet that the automatic telephones will do away completely with the central station telephone."

Talking Without Wires.
"How about the wireless telephony?"

"That is a new invention which is shown in a comparatively new way, and on a sound engineering basis for the first time at this

exposition. You can see it in the Palace of Electricity and listen to the transmission of articulate speech without wires. Prior to this, demonstrations have been effected where the ground or currents of water have been used as a means of perfecting the circuit between the instruments. Here at the exposition we have an absolute disconnection of the transmitting and receiving instruments, one from the other, without any physical connection whatsoever. A person, equipped with one of these telephone transmitters and the coil attached thereto, can pass freely through the court and central aisles of this great building and distinctly hear the words spoken at the transmitting station, which is entirely out of view and far beyond ear range.

The intent of this demonstration is to conclusively prove that the connection is absolutely wireless. We can easily show the general public that wireless telephone stations are installed and in operation, but it is difficult to make many believe that there is not some means of transmission between the stations. You can easily see that this could not be the case with the wireless telephone system exhibited here, as the person having the receiving apparatus in his hand knows that it is entirely free from any outside connection."

"Then the only use of this invention is to listen to some central speaker or to talk between man and man?"

"So far the system is used here only as a means of enabling one speaker to talk to large number of listeners. Whether it will ever have a commercial value remains to be shown."

"How large an audience could one man address through one of these machines and be distinctly heard, Prof. Goldsborough?" I asked.

"As an engineering possibility it would be perfectly feasible to install such an apparatus, so that one speaker could address at least 100,000 people, and each could hear him with equal distinctness. Such an experiment, however, would require the installation of a set of instru-

ments which would be valueless in connection with any other kind of a demonstration."

The Wireless Telegraph.
"How about the wireless telegraph?"

"That is a different proposition," said the chief of the electricity palace. "Half a dozen systems of wireless telegraphs are now being used. There are several operated in the United States, and Great Britain is spending a large sum of money every year to equip its battleships with them. Our government is also experimenting with the different systems, and wireless telegraphy is now used by the public on a very extensive scale. It is used far more than the people realize in communications between stations on land and upon sea. There are at the present time two well organized and strong companies carrying on the wireless telegraph business in the United States. The De Forest Wireless Telegraph company has here at the exposition, in addition to two finely equipped stations inside the electricity building, two towers, each of which is over 250 feet high. From these towers messages can be simultaneously sent out to two different points, and before the closing of the fair they will transmit messages as far as Kansas City and Chicago."

"Do you think it will ever be possible to telegraph across the Pacific, Prof. Goldsborough?"
"It is within the range of possibility, although it may be long before it is attained. The De Forest company has already equipped a large station at Seattle. We have a model of that station in the electricity building. From Seattle messages will be sent to Alaska, to cities on the Pacific coast, and possibly to the Hawaiian Islands and the Orient. It would be a wonderful thing if they could telegraph from San Francisco to China, would it not?"

New Things in Transportation.
The conversation here turned to electrical transportation, and I asked as to

the progress made in that direction. Prof. Goldsborough replied:

"In electrical transportation there is nothing new which the public can appreciate. There are new things, I might say startlingly new, to the engineering world, and likely to entirely revolutionize the system of electrical transportation, especially over long distances; but the character of the inventions is so extremely technical that the general public would not be able to appreciate all that they carry with them. A car equipped with an apparatus designed to work under a high pressure alternating current does not appear different in any degree from the present trolley car to the layman, and, indeed, only a trained and skilled electrician could appreciate to any great extent what this new development involves."

"Does that mean that electricity will take the place of steam on our big railroads?"

"I think it safe to say," replied the electrician, "inasmuch as electric cars are now being operated between cities several hundred miles apart, more cheaply and with the same safety and speed as the steam railroads, and that without the aid of freight traffic, that the capitalists will eventually see that they can make a saving by doing away with the steam locomotive and taking the electric locomotive in its place. This is especially so because recent developments include electric railway apparatus which are much more economical for long distance work than those now common in America."

"The fact that the New York Central railroad has equipped thirty-six miles of its main track near the city of New York with electric apparatus and has placed an order for thirty electric locomotives capable of making a speed of seventy-five miles per hour with heavy Pullman trains, is one indication that a great change is about to take place in the method of handling traffic on our big roads. This change will first come where the volume of business is heavy, and where there are many trains every day."

Cooking by Lightning.
I see that you have girls here cooking by means of lightning. You have electric irons and electric stoves, and all sorts of electrical cooking appliances as well as electrical heaters. Are these things practical?"

"I think they are," said the head of the electrical department of the World's fair. "Electric heating is now used very extensively. A great number of factories now employ electric soldering irons and heating irons. They find it economical inasmuch as the person pressing out hats or cloth does not have to stop every few minutes to get a hot iron from a stove or heater. The electric iron is always hot and a ways ready for use, and the operator's efficiency is greatly increased by her having an electrically heated device rather than one heated by other means."

"As to the use of electrical heating apparatus in the household, it is safe to say that it is constantly encroaching upon the more primitive methods. Electrical heating and electrical cooking are far superior to any other in the matter of convenience. Wherever water must be heated it can be heated as economically by the electrical apparatus as by gas or coal, and such cooking and heating can be made easily done than by any other means."

"A very important thing about cooking and heating by electricity," continued Prof. Goldsborough, "is that it is much more sanitary than cooking or heating by coal or gas. Electricity makes less dirt and the apparatus can be quickly and readily cleaned. Again, you can heat any desired vessel without heating up the rest of your surroundings. You can make coffee without warming the cook and the room to a high temperature, as you must do if you would heat a smaller quantity of water by coal, wood or gas. By the electrical apparatus all the heat is kept inside the coffee pot and the cook and the room are at a comfortable temperature. You may say this cooking going on in the building. We have here utensils for the entire range of

three pairs of driving wheels. Then just back of the hindmost driver is another pair of steam cylinders turning three more pairs of driving wheels. So there are six pairs of driving wheels upon which rests the entire weight of this immense engine.

The total weight of engine and tender is 20 tons, which is nearly double that of any other engine shown. And yet some of these are mounted on an elevated turntable, where it puffs away, turning its wheels, and at the same time slowly rotating on the turntable. Nearby is a series of locomotives from the earliest crude beginnings up to the present type. When one compares the feeble little engines of seventy-five to eighty years ago with such powerful machines as those mentioned above, he gets some idea of the great improvements which have been made in transportation.

Universities and Schools.
But I must hasten on. I can only glance at the Educational building, with its space given to the colleges and schools of the country. Here is a room labeled "Harvard," there one with the inscription of Yale, another with Columbia, still others with Johns Hopkins, Michigan, Cornell, California, etc. Here the loyal sons of these institutions write their names in the visitors' books and fondly look over the catalogues and descriptions of the glories and advantages of their favorite colleges. I visit the exhibit of the Nebraska schools and again have cause to feel proud of my

state. The well selected matter and its artistic arrangement, impress one most favorably. Nebraska's educational exhibit is one of the gems of the building.

The Government Building.

When Uncle Sam undertakes to make a showing of what he does it is well done. That we learned in Chicago and Omaha. In the first place the Government building in the St. Louis fair is very pretty, with effective colonnades on its northwestern side. If we run down the central corridor and glance right and left we see the exhibits of the Postoffice department, Interior department, Commerce and Labor, Treasury, War, Navy, Justice, State and Agriculture. The postoffice people show how letters are stamped by a machine, which does the work of a man; and the treasury people show how actually coined money. The Agricultural department shows new seeds and products, new and strange insects, models of machines and buildings, etc. There are cases containing samples of timber diseases, models of nutcrackers, sugar beets, apples, peaches and pears, cases of flax, grains, grasses, weeds, nuts, etc. In one corner is a pathological laboratory, with an expert to run it. In another we find an expert in general charge of the agricultural exhibits, general and ready to give helpful information. Yes, Uncle Sam knows how to make a good show.

Little Brown Men and Women.

One day I accepted an invitation from my old time friend, Dr. Wilson, and went with him to see the little brown men and women. We saw the products of the islands, the beautiful woods, the striking pictures and statuary, but the most interesting of all are the people themselves. The full grown men look like 14-year-old boys and the women like girls about 12 to 13. The children are the funniest of all, quick and bright, and yet honest and simple-minded. There is, however, a great distance from them to us. If our ancestors were like these curious Filipinos, it is not hard to see how long time they are still in the childhood state of the human race, and here, no doubt, they would have remained for ages had we not come into relation with them. We shall probably be able to develop them with great rapidity, for they appear to be eager to learn. We shall probably witness the quick development of these Oriental people, as we have the Japanese already they are laying aside their breech-cloth suits and putting on our coats, trousers, shoes and hats. I saw one child wearing a silk hat. They are like our Indians in their love of adorning themselves in our garments.

Here my visit ended. From the Filipino village I hurry to my hotel and to the crowded railway station, and find a row of trains. The train pulls out, and in no distance I catch sight of the flashing lights of the great exposition as we go rattling by in the dusk of the early evening on our way toward Nebraska. In due time our train pulls into the home station once more and the World's fair is a pleasant memory and a thing of the past.

CHARLES E. BESSEY.

The Last of Nebraska's Buffaloes

AMITA, Ia., Oct. 25, 1904.—To the Editor of The Bee: In Sunday's issue of The Bee I notice an article entitled "Nebraska's Last Buffalo." In which I took considerable interest on account of the fact that it refers to matters which took place in my old home, Furnas county, Nebraska, where the writer "ran wild" in his boyhood days, from 1871 to 1875. In the year '71 my father emigrated from Warren county, Iowa, to Furnas county, Nebraska, and located a claim five miles south of Beaver City, now the county seat of that county. At a small town called Richmond a store and postoffice combined was operated by a man by the name of Brown—Judge Brown—the first judge in Furnas county.

Beaver City was at that time composed of a store and postoffice. This was in 1871. In 1872 a man came and built a hotel and put up a blacksmith shop. Beaver City is located on Beaver creek, and Richmond is five miles south on the Sappe, from which place I carried mail on horseback, tied on behind the saddle.

I stopped at Spring Green and made two or three other points up the Sappe, as the settlements were at that time only on the streams, and the distance from Richmond to Kimball was twenty-eight miles, and we made the trip in a day two days each week, rain or shine, as we were under bonds to protect that mail "unto death." So I provided myself with a big, ugly looking .44 Colt and a carbine, and considered myself well fortified. We also drove freight wagons from what was then Plum Creek station south across the country to Richmond, a distance of about sixty-five miles; stopped at a place called Dad's Rancho and at another called Vaughn's Rancho.

The next stop was Arapahoe, then Beaver City, then on to our own little town of Richmond; and on one or two occasions I remember in making the trip we were met near Arapahoe and escorted home by hunters, or scouts, for fear some one would hold us up and take our goods. I remember

one man very distinctly—Harry Brayton—who rode behind my wagon and said to me, "Don't be afraid, kid, the old man is here." In 1872 the postmaster at Spring Green, Wickliffe Newell, took the contract to supply several thousand pounds of buffalo, and myself and two other parties, Mathon and Galen James, took the contract to deliver the meat to Beaver City. About the last of November we loaded our wagons with provisions and grain enough to last us three weeks and started for the headwaters of the south fork of the Republican river.

We left Beaver City about the 1st of December, followed up the Beaver creek through a place called Wilcoxville, then to Cedar Bluffs and from thence to Big Timber, and then crossed over onto the Republican and followed it up to the headwaters, got onto the wrong trail and missed our man, Newell; wandered around three or four days, became discouraged and started back. By and by we overtook a hunter by the name of Ray, and James hired him to kill our meat, which he soon did, and we struck the back track for home. The weather began to get cold, our horses fed was exhausted, our flour and coffee had run out and we were finally compelled to abandon our loads of meat in order to get back. The weather got colder, the snow began to come down thick and fast, and the wind blew a perfect gale from the north, and such a blizzard no one ever saw, unless he lived in that country. The storm lasted for three or four days. Finally my team gave out, as did also one of the horses belonging to James, and we were forced to abandon them; took the best one of James' teams, loaded all our bedding in one wagon and finally, after being out forty-eight days, managed to get back home with badly frozen feet—about all in.

Speaking about buffalo in Nebraska, the last one I saw in Furnas county was killed by a man named Harve Brodard. He and Leven Tompkins were together, and after considerable effort finally bagged the big fellow. This was along in June, 1873.



PROF. GOLDBOROUGH, CHIEF OF PALACE OF ELECTRICITY AT ST. LOUIS.

Romantic and Curious Matrimonial Ties

Three Ceremonies in as Many Days.

ST. LOUIS, Oct. 28.—A dingy little office, nine feet square, the headquarters of the Italian consul, is a scene of activity. Miss Edith Ann Oliver, unattended by any member of her family, was married to the Marquis Alfred Dusmot de Smours, a titled Italian.

The previous afternoon the couple were married by a justice of the peace in Lee township. The following day there was another wedding in St. James Roman Catholic church at Sewickley Heights. This wedding was an unostentatious affair. Social Pittsburgh is just a little startled, to say the least. Miss Oliver is the daughter of James B. Oliver, and it was not until the Oliver family landed in New York some months ago, bringing with them the titled Italian, that news of the engagement was given out.

Fast Train Aids Elopers.

By stopping one of the fastest trains on its road at a little way station superintendent Max of the Seaboard Air Line, aided J. H. Ghoslin, a merchant of Sta. Regno, Va., to escape with pretty Janie Farrow before her angry guardian could intercept them.

For some reason the girl's guardian, who was also her uncle, did not look with favor on the suit of Mr. Ghoslin. Ghoslin, however, formed a plan and succeeded in communicating with the girl. Mr. Hix agreed to have the fast train stopped for them near the girl's house. She gave her guardian the slip and before he knew what was happening, the two were beyond his reach. They were married at Warrenton, N. C.

Widow, Bride and Widow.

Widow, wife and again a widow within the short space of seven hours is the misfortune of Mrs. Eva H. Lyons, who, braving the danger of contracting smallpox, entered the Municipal hospital, Philadelphia, and there was united in marriage to her lover, Frank E. Lyons, who was crit-

ically ill with the disease. The ceremony was performed across the phone by Magistrate McCleary. Seven hours later the groom succumbed to the malady.

Mrs. Lyons herself is prostrated from the shock. Her condition, however, is not serious. Mrs. Lyons, then Mrs. Mehren, a pretty young widow, who married her stricken lover, had hoped by her presence to assist in cheering him to a speedy recovery. It was only a hope, one in which the physicians encouraged her, but little. The excitement of the ceremony told on the patient and he began to sink rapidly. Stimulants were given, but their efforts were of little avail. The wife sank to the floor in prayer, while attendants withdrew, leaving the bride alone to watch the life of her lover slowly ebbing away from her.

When led away and the full realization of the death overcame her, the newly made bride collapsed.

Wedding Cost Her \$10,000.

Mrs. Frances Levering Plouts Rogers, whose marriage in Wilkesbarre, Pa., to Joseph Brooks Rogers, a society man, on September 28, was kept a secret until October 21, when she began suit to recover \$10,000 from her husband at Knoxville, Tenn., which sum, she alleges, she gave him on their wedding day, is one of the largest heiresses in that section of Pennsylvania. She comes of one of the oldest families in the county, and her forefathers were among the early settlers here.

The family home at Riverside, just below Wilkesbarre, is deserted, but an interview with a distant relative of the family brought out the fact that the couple had met in Colorado and the match was soon arranged. The woman claims that just before she left Wilkesbarre she converted about \$10,000 worth of stocks in a bank in Wilkesbarre into cash. This is supposed to have been the money which she charges her husband of three weeks with taking with him when he left home.